

Claims

1. Flow valve for a flow distributor for the pressure fluid supply of several hydraulic consumers comprising a pressure regulator and a metering orifice which can be flown through for dividing a flow in the direction of the consumer and for accumulating pressure fluid flows in the opposite direction, wherein the pressure regulator includes a pressure regulator piston biased into a home position to which, one the one hand, pressure prevailing in a LS line can be applied and, on the other hand, pressure prevailing in the pressure fluid flow path between the metering orifice and the pressure regulator can be applied, characterized in that the pressure regulator piston includes two control edges one of which is active during accumulating and the other is active during dividing and that, moreover, at least one LS control edge is provided by which, when the pressure regulator is opened, for load-indicating into the LS line a LS cross-section can be controlled to be opened for tapping off the pressure prevailing in the pressure fluid flow path.
2. Flow valve according to claim 1, wherein the pressure regulator is opened in the home position.
3. Flow valve according to claim 1 or 2, wherein a LS control edge is active during accumulating and another LS control edge is active during dividing and these control edges are formed by a 2/2 port directional control valve.
4. Flow valve according to claim 3, wherein the 2/2 port directional control valve is formed by an internal piston guided in a guide bore of the pressure regulator

piston and including a control collar at the two annular end faces of which the two LS control edges are arranged.

5. Flow valve according to claim 4, wherein the pump
5 pressure can be applied to one end face of the internal
piston and a pressure corresponding to the load pressure
can be applied to the other end face.

10. Flow valve according to claim 4 or 5, wherein the LS
line opens into a LS spring chamber of the pressure
regulator and wherein the LS cross-section between the LS
spring chamber and a passage of the pressure regulator
piston guiding the load pressure can be controlled to be
opened via the LS control edges of the control collar.
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7. Flow valve according to claim 6, wherein the LS
spring chamber is communicated via a communicating
passage extending between the internal piston and the
guide bore with a spring chamber into which a radially
20 set-back end portion of the internal piston immerses and
there is movable against a stop.

8. Flow valve according to claim 7, wherein another end
portion of the internal piston passes through the LS
25 spring chamber and is guided by a guiding collar in a
pressure chamber of a screw plug to which the pump
pressure is applied and which includes an axial stop for
the internal piston.

30. 9. Flow valve according to claim 7 or 8, wherein the
internal piston includes a radial collar for guiding the
internal piston in the guide bore and wherein
longitudinal notches are formed at the radial collar and
at the control collar and adjacent areas of the internal

piston are designed to have radial play for forming a communicating passage.

10. Flow valve according to any one of the preceding
5 claims, wherein the pressure regulator piston includes a central control groove at the annular end faces of which the two control edges are formed and wherein the pressure regulator piston is biased into a central position via two centering springs.
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11. Flow valve according to claim 10, wherein the pressure regulator piston has at least one radial bore opening, on the one hand, in the area of the control collar into the guide bore and, on the other hand, into a
15 chamber guiding the load pressure.
12. Flow valve according to any one of the preceding claims, comprising a pressure feed valve.
- 20 13. Flow distributor for the pressure fluid supply of several consumers having several flow valves according to any one of the preceding claims.